PIPE DATA

Table A-1
NOMINAL PHYSICAL PROPERTIES
POLYPIPE® PE3408 AND PE2406 PIPE MATERIAL

PROPERTY	ASTM TEST METHOD	Nominal Value* PE3408	PE2406
Cell Classification	D3350	345464C	234363E
Density, Natural	D1505	0.946 gm/cc	0.940 gm/cc
Density, Black	D1505	0.955 gm/cc	0.943 gm/cc
Melt Index (190°C/2.16 kg)	D1238	0.07 gm/10 min	0.2 gm/10 min
Flow Rate (190°C/21.6 kg)	D1238	8.5 gm/10 min	20 gm/10 min
Flexural Modulus	D790	136,000 psi	100,000 psi
Elastic Modulus: short-term	D638	125,000 psi	100,000 psi
Elastic Modulus: long-term	D638	30,000 psi	25,000 psi
Tensile Strength @ Yield	D638	3,500 psi	2,800 psi
ESCR	D1693	>10,000 hrs. failure	>10,000 hrs. failure
Slow Crack Growth, PENT	F1473	>100 hrs.	>1,000 hrs.
HDB @ 73.4°F	D2837	1,600 psi	1,250 psi
HDB @ 140°F	D2837	800 psi	800 psi
UV Stabilizer (Carbon)	D1603	2.5%	2.5%
Brittleness Temperature	D746	<-180°F	<-180°F
Melting Point	D789	261°F	261°F
Vicat Softening Temperature	D1525	255°F	248°F
Hardness	D2240	64	64 Shore D
Izod Impact Strength (Notched)	D256	7 ft-lb_f/in	10 ft-lb_f/in
Thermal Expansion Coefficient	D696	1.0 x 10^{-4} in/in/°F	1.0 x 10^{-4} in/in/°F
Poisson's Ratio	--	0.42	0.42
Manning Roughness	--	0.01	0.01
Volume Resistivity	D991	2.6 x 10^{16} Ω-cm	2.6 x 10^{16} Ω-cm
Average Molecular Weight	GPC	330,000	330,000

*Note: Nominal values are not intended as specification limits.

Table A-2 (cont.)
PIPE WEIGHTS AND DIMENSIONS *(IPS)*
PE3408 *(BLACK)*

OD			SDR	Nominal ID		Minimum Wall		Weight	
Nominal	Actual							lb. per	kg. per
in.	in.	mm.		in.	mm.	in.	mm.	foot	meter
			7	6.06	153.98	1.232	31.30	12.433	18.503
			7.3	6.17	156.65	1.182	30.01	12.010	17.872
			9	6.63	168.44	0.958	24.34	10.054	14.962
			9.3	6.70	170.08	0.927	23.56	9.771	14.541
			11	6.99	177.65	0.784	19.92	8.425	12.538
8	8.625	219.08	11.5	7.07	179.45	0.750	19.05	8.096	12.049
			13.5	7.30	185.32	0.639	16.23	7.001	10.418
			15.5	7.47	189.68	0.556	14.13	6.164	9.174
			17	7.57	192.27	0.507	12.89	5.657	8.418
			21	7.77	197.38	0.411	10.43	4.637	6.901
			26	7.94	201.55	0.332	8.43	3.784	5.631
			7	7.56	191.92	1.536	39.01	19.314	28.743
			7.3	7.69	195.25	1.473	37.40	18.656	27.764
			9	8.27	209.95	1.194	30.34	15.618	23.242
			9.3	8.35	211.98	1.156	29.36	15.179	22.589
			11	8.72	221.42	0.977	24.82	13.089	19.478
10	10.750	273.05	11.5	8.81	223.66	0.935	23.74	12.578	18.717
			13.5	9.09	230.98	0.796	20.23	10.875	16.184
			15.5	9.31	236.41	0.694	17.62	9.576	14.251
			17	9.43	239.64	0.632	16.06	8.788	13.078
			21	9.69	246.01	0.512	13.00	7.204	10.721
			26	9.89	251.21	0.413	10.50	5.878	8.748
			32.5	10.06	255.57	0.331	8.40	4.742	7.058
			7	8.96	227.62	1.821	46.26	27.170	40.433
			7.3	9.12	231.57	1.747	44.36	26.244	39.056
			9	9.80	249.00	1.417	35.98	21.970	32.695
			9.3	9.90	251.42	1.371	34.82	21.353	31.777
			11	10.34	262.61	1.159	29.44	18.412	27.400
12	12.750	323.85	11.5	10.44	265.28	1.109	28.16	17.693	26.330
			13.5	10.79	273.95	0.944	23.99	15.298	22.767
			15.5	11.04	280.39	0.823	20.89	13.471	20.047
			17	11.19	284.23	0.750	19.05	12.362	18.397
			21	11.49	291.77	0.607	15.42	10.134	15.081
			26	11.73	297.94	0.490	12.46	8.269	12.305
			32.5	11.93	303.12	0.392	9.96	6.671	9.928
			7	9.84	249.94	2.000	50.80	32.758	48.750
			7.3	10.01	254.28	1.918	48.71	31.642	47.089
			9	10.76	273.42	1.556	39.51	26.489	39.420
			9.3	10.87	276.07	1.505	38.24	25.745	38.313
			11	11.35	288.36	1.273	32.33	22.199	33.036
14	14.000	355.60	11.5	11.47	291.28	1.217	30.92	21.332	31.746
			13.5	11.84	300.81	1.037	26.34	18.445	27.449
			15.5	12.12	307.88	0.903	22.94	16.242	24.170
			17	12.29	312.09	0.824	20.92	14.905	22.181
			21	12.61	320.38	0.667	16.93	12.218	18.183
			26	12.88	327.15	0.538	13.68	9.970	14.836
			32.5	13.10	332.84	0.431	10.94	8.044	11.970

(See ASTM D3035, F714 and AWWA C-901/906 for OD and wall thickness tolerances).
(Weights are calculated in accordance with PPI TR-7).

Dimensions of Nipak PE 3408 High Density Polyethylene Pipe

TABLE 2

Nominal IPS Diameter (Inches)	Actual Outside Diameter (inches)	SDR 7.3 (250 PSI)*		SDR 9 (200 PSI)*		SDR 11 (160 PSI)*		SDR 13.5 (125 PSI)*		SDR 15.5 (110 PSI)*	
		Minimum Wall (Inches	Weight (lb/ft)	Minimum Wall (inches)	Weight (lb/ft)	Minimum Wall (inches)	Weight (lb/ft)	Minimum Wall (Inches)	Weight (lb/ft)	Minimum Wall (Inches)	Weight (lb/ft)
2	2.375	0.326	0.92	0.264	0.77	0.216	0.64	—	—	—	—
3	3.500	0.480	1.99	0.389	1.66	0.318	1.39	0.259	1.15	0.226	1.02
4	4.500	0.616	3.28	0.500	2.74	0.409	2.30	0.333	1.90	0.290	1.68
5	5.563	0.762	5.02	0.618	4.19	0.506	3.51	0.412	2.91	0.359	2.56
6	6.625	0.908	7.12	0.736	5.95	0.602	4.98	0.491	4.13	0.427	3.63
8	8.625	1.182	12.07	0.958	10.07	0.784	8.43	0.639	7.00	0.556	6.15
10	10.750	1.473	18.75	1.194	15.65	0.977	13.10	0.796	10.87	0.694	9.57
12	12.750	1.747	26.37	1.417	22.03	1.159	18.43	0.944	15.29	0.823	13.47
14	14.000	1.918	31.79	1.556	26.57	1.273	22.23	1.037	18.44	0.903	16.23
16	16.000	—	—	1.778	34.69	1.455	29.04	1.185	24.09	1.032	21.19
18	18.000	—	—	2.000	43.90	1.636	36.73	1.333	30.48	1.161	26.82
20	20.000	—	—	—	—	1.818	45.35	1.481	37.63	1.290	33.11
22	22.000	—	—	—	—	2.000	54.88	1.630	45.55	1.419	40.07
24	24.000	—	—	—	—	—	—	1.777	54.18	1.548	47.68

Nominal IPS Diameter (Inches)	Actual Outside Diameter (Inches)	SDR 17 (100 PSI)*		SDR 21 (80 PSI)*		SDR 26 (60 PSI)*		SDR 32.5 (50 PSI)*	
		Minimum Wall (Inches)	Weight (lb/ft)	Minimum Wall (Inches)	Weight (lb/ft)	Minumum Wall (Inches)	Weight (lb/ft)	Minimum Wall (Inches)	Weight (lb/ft)
3	3.500	0.206	0.93	0.167	0.76	—	—	—	—
4	4.500	0.265	1.54	0.215	1.26	—	—	—	—
5	5.563	0.327	2.34	0.265	1.93	—	—	—	—
6	6.625	0.390	3.34	0.316	2.74	0.255	2.23	0.204	1.80
8	8.625	0.508	5.65	0.411	4.63	0.332	3.78	0.266	3.05
10	10.750	0.633	8.79	0.512	7.19	0.414	5.87	0.331	4.73
12	12.750	0.750	12.34	0.608	10.13	0.491	8.26	0.393	6.66
14	14.000	0.824	14.90	0.667	12.20	0.539	9.95	0.431	8.02
16	16.000	0.942	19.46	0.762	15.93	0.616	13.00	0.492	10.47
18	18.000	1.059	24.61	0.858	20.18	0.693	16.46	0.554	13.26
20	20.000	1.176	30.37	0.952	24.88	0.769	20.29	0.615	16.36
22	22.000	1.294	36.76	1.048	30.13	0.846	24.55	0.677	19.81
24	24.000	1.412	43.76	1.143	35.84	0.923	29.22	0.738	23.55
28	28.000	1.647	59.55	1.333	48.77	1.077	39.78	0.862	32.09
36	36.000	2.118	98.46	1.715	80.67	1.385	65.77	1.108	53.04

*Pressure rating for water at 73 ble 17, page 9-2 for additional pressure

Standard pipe lengths: 40 feet

Nipak high density polyethylene pipe diameters from ½" CTS to 2" IPS. 3" IPS pi

Metric sizes and special sizes are available on special order.

Post-it® Fax Note 7671	Date	# of pages ▷
To George	From	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

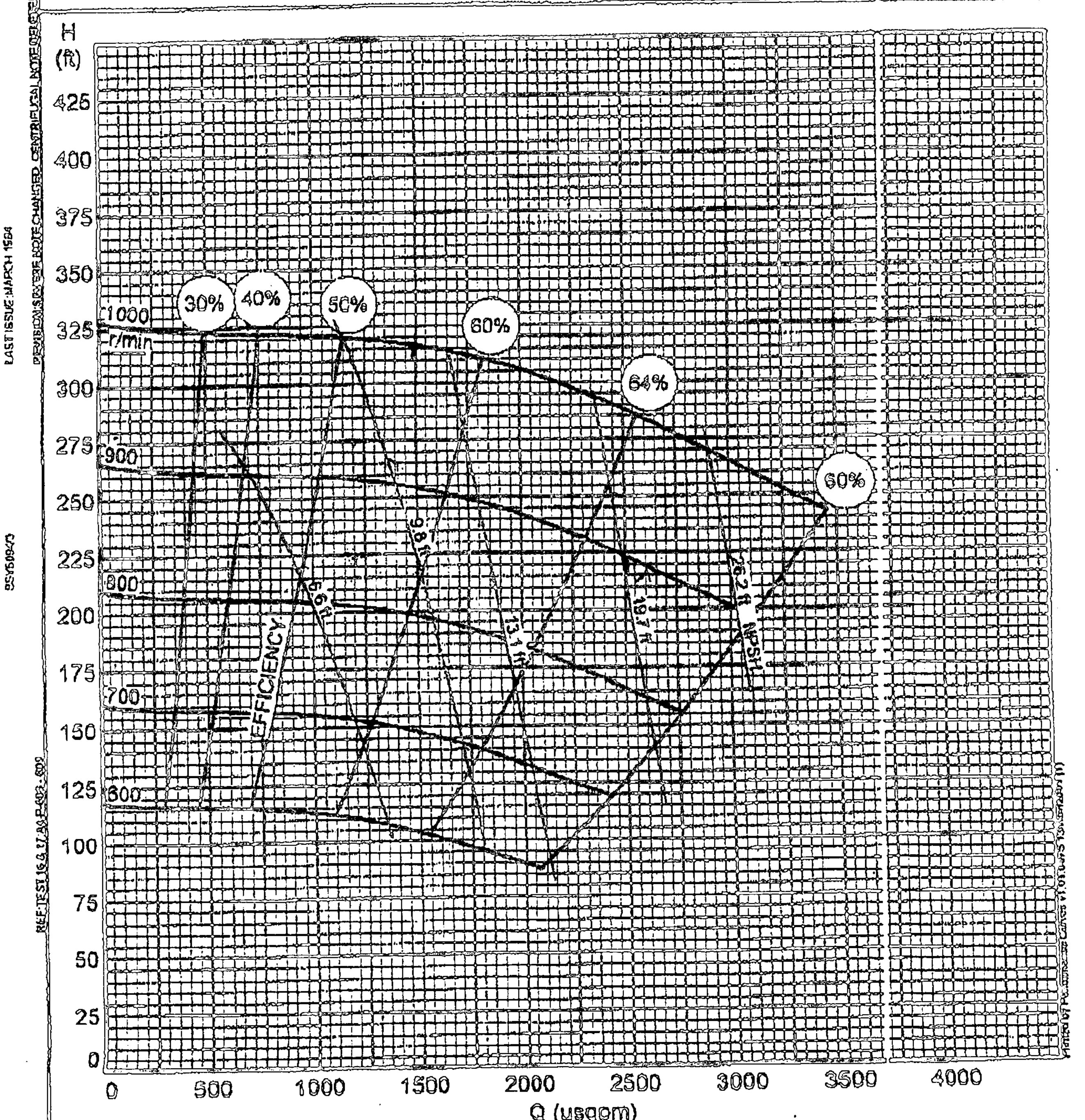
WEIR SLURRY GROUP

PERFORMANCE CURVES

WARMAN PUMP				IMPELLER: FH4147					WPA 64E01U
SIZE	FRAME		TYPE	VANES	TYPE	IMPELLER MATL	VANE Ø	LINER MATL	
6/4	F	FF(X)	HH	5	Closed	Metal	23	Metal	ISSUED JUNE 1985
	S(X)			GLAND SEALED PUMP					

Frame	F	FF(X)	S(X)	NORMAL MAX. SPEED 1000 r/min	MIN. PASSAGE SIZE 2.2 inch SPHERE
Rating (HP)	349	578	791		

CURVE SHOWS APPROXIMATE PERFORMANCE FOR CLEAR WATER. (To International Test Standard ISO2548 Class C) : For media other than water, corrections must be made for density, viscosity and/or other effects of solids. WARMAN INTERNATIONAL LTD. reserve the right to change pump performance and/or delete impellers without notice. Frame suitability must be checked for each duty and drive arrangement. Not all frame alternatives are necessarily available from each manufacturing centre.



AEC 02347

ADDENDUM TO PART 3, PAGE 27, G(5), AMERICAN ENERGY CORP.

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF:

April 15, 2003

Operations and Readiness Division
Regulatory Branch
200300425

Mr. Donald M. Brafford
Jack A. Hamilton & Associates, Inc.
Box 471
342 High Street
Flushing, Ohio 43977

Dear Mr. Brafford:

I refer to your Department of the Army Permit Application, received in this office March 24, 2003 regarding the proposal by American Energy Corporation to construct a slurry pipeline crossing over Casey Run in Washington Township, Belmont County, Ohio.

Activities associated with projects of this type are authorized by Nationwide Permit No. 12 (see enclosure), previously issued by the Corps of Engineers for purposes of Section 404 of the Clean Water Act, as published in the January 15, 2002 issue of the Federal Register.

Enclosed is a list of conditions which must be followed for the Nationwide Permit to be valid. Adherence to these conditions will permit you to proceed with the proposed project. Please Note, the attached Compliance Certification Form must be signed and returned to this office upon completion of the proposed work.

The verification of this Nationwide Permit is valid until April 15, 2005 unless the Nationwide Permit is modified, suspended, or revoked. If project specifications are changed or work has not been initiated before April 15, 2005, please contact this office for further approval.

The issuance of this Nationwide Permit will not relieve you of the responsibility to obtain any other required state, local, or Federal authorizations.

If you have any questions, please contact Richard Sobol at (412) 395-7153.

Sincerely,

Albert H. Rogalla
Chief, Regulatory Branch

Enclosure

Compliance Certification Form

PERMIT NUMBER: 200300425

NAME OF PERMITTEE: American Energy Corporation

DATE OF ISSUANCE: April 15, 2003

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Pittsburgh District
Regulatory Branch, Room 1834
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Please note that your permitted activity is subject to compliance inspection by a U.S. Army Corps of Engineers Representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____
Signature of Permittee

(12) Utility Line Discharges. Discharges of dredged or fill material associated with excavation, backfill or bedding for utility lines, including outfall and intake structures, provided there is no change in preconstruction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquefiable, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone and telegraph messages, and radio and television communication. The term "utility line" does not include activities which drain a water of the United States, such as drainage tile; however, it does apply to pipes conveying drainage from another area. This NWP authorizes mechanized landclearing necessary for the installation of utility lines, including overhead utility lines, provided the cleared area is kept to the minimum necessary and preconstruction contours are maintained. However, access roads, temporary or permanent, or foundations associated with overhead utility lines are not authorized by this NWP. Material resulting from trench excavation may be temporarily sidecast (up to three months) into waters of the United States, provided that the material is not placed in such a manner that it is dispersed by currents or other forces. The DE may extend the period of temporary side-casting not to exceed a total of 180 days, where appropriate. The area of waters of the United States that is disturbed must be limited to the minimum necessary to construct the utility line. In wetlands, the top 6" to 12" of the trench should generally be backfilled with topsoil from the trench. Excess material must be removed to upland areas immediately upon completion of construction. Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line. (See 33 CFR Part 322).

Notification: The permittee must notify the district engineer in accordance with the "Notification" general condition, if any of the following criteria are met:

a) Mechanized landclearing in a forested wetland;
b) A Section 10 permit is required for the utility line;
c) The utility line in waters of the United States exceeds 500 feet; or,
d) The utility line is placed within a jurisdictional area (*i.e.*, a water of the United States), and it runs parallel to a streambed that is within that jurisdictional area. (Sections 10 and 404)

Ohio State Certification General Conditions apply to this nationwide permit.

Ohio State Certification Special Conditions and Limitations:

The length of utility line crossings in streams and/or rivers shall not exceed twice the width of the waterbody at that location.

This Nationwide Permit shall authorize sidecasting or stockpiling of dredged material for a maximum of 3 months.

In wetlands, at least the top six inches of backfill over a utility line shall consist of the topsoil material removed form the trench.

The Ohio Administrative Code Rule 3745-1-01 requires that notice must be given to the Director of Ohio EPA before chemicals are applied for the control of aquatic plants or animals in waters of the State (including wetlands). Applicants who intend to use chemicals in waters of the State shall contact the Ohio EPA, Division of Surface Water P.O. Box 1049. Columbus, OH 43216-1049 prior to the applications of any chemicals.

This Nationwide Permit shall not authorize utility line installations greater than 1000 feet in length in forested wetlands, which are defined by Cowardin, Lewis M., 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Washington, D.C. to be characterized by woody vegetation that is 6 meters tall or taller. All water regimes are included except subtidal.

NATIONWIDE PERMIT CONDITIONS

GENERAL CONDITIONS:

The following general conditions must be followed in order for any authorization by a NWP to be valid:

1. ***Navigation.*** No activity may cause more than a minimal adverse effect on navigation.

2. ***Proper maintenance.*** Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. ***Erosion and siltation controls.*** Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date.

4. *Aquatic life movements.* No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water.

5. *Equipment.* Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

6. *Regional and case-by-case conditions.* The activity must comply with any regional conditions which may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its section 401 water quality certification.

7. *Wild and Scenic Rivers.* No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely effect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (*e.g.*, National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service.)

8. *Tribal rights.* No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. *Water quality certification.* In certain states, an individual Section 401 water quality certification must be obtained or waived (see 33 CFR 330.4(c)).

10. *Coastal zone management.* In certain states, an individual state coastal zone management consistency concurrence must be obtained or waived (see Section 330.4(d)).

11. *Endangered Species.*

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act, or which is likely to destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project, and shall not begin work on the activity until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

(b) Authorization of an activity by a nationwide permit does not authorize the "take" of a threatened or endangered species as defined under the Federal Endangered Species

Act. In the absence of separate authorization (*e.g.*, an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, *etc.*) from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, both lethal and non-lethal "takes" of protected species are in violation of the Endangered Species Act. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. Fish and Wildlife Service and National Marine Fisheries Service or their world wide web pages at http://www.fws.gov/~r9endspp/endspp.html and http://kingfish.spp.mnfs.gov/tmcintyr/prot_res.html#ES and Recovery, respectively.

12. *Historic properties*. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the DE has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)).

13. *Notification*.

Notification requirements are not applicable of have been satisfied.

14. *Compliance certification*. Every permittee who has received a Nationwide permit verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
b. A statement that any required mitigation was completed in accordance with the permit conditions;
c. The signature of the permittee certifying the completion of the work and mitigation.

15. *Multiple use of Nationwide permits*. In any case where any NWP number 12 through 40 is combined with any other NWP number 12 through 40, as part of a single and complete project, the permittee must notify the District Engineer in accordance with paragraphs a, b, and c on the "Notification" General Condition number 13. Any NWP number 1 through 11 may be combined with any other NWP without notification to the Corps, unless notification is otherwise required by the terms of the NWPs. As provided at 33 CFR 330.6(c) two or more different NWPs can be combined to authorize a single and

complete project. However, the same NWP cannot be used more than once for a single and complete project.

SECTION 404 ONLY CONDITIONS:

In addition to the General Conditions, the following conditions apply only to activities that involve the discharge of dredged or fill material into waters of the U.S., and must be followed in order for authorization by the NWPs to be valid:

1. *Water supply intakes.* No discharge of dredged or fill material may occur in the proximity of a public water supply intake except where the discharge is for repair of the public water supply intake structures or adjacent bank stabilization.

2. *Shellfish production.* No discharge of dredged or fill material may occur in areas of concentrated shellfish production, unless the discharge is directly related to a shellfish harvesting activity authorized by NWP 4.

3. *Suitable material.* No discharge of dredged or fill material may consist of unsuitable material (*e.g.*, trash, debris, car bodies, asphalt, etc.,) and material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

4. *Mitigation.* Discharges of dredged or fill material into waters of the United States must be minimized or avoided to the maximum extent practicable at the project site (*i.e.*, on-site), unless the District Engineer approves a compensation plan that the District Engineer determines is more beneficial to the environment than on-site minimization or avoidance measures.

5. *Spawning areas.* Discharges in spawning areas during spawning seasons must be avoided to the maximum extent practicable.

6. *Obstruction of high flows.* To the maximum extent practicable, discharges must not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water (unless the primary purpose of the fill is to impound waters).

7. *Adverse effects from impoundments.* If the discharge creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow shall be minimized to the maximum extent practicable.

8. *Waterfowl breeding areas.* Discharges into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

9. *Removal of temporary fills.* Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

D. OHIO STATE CERTIFICATION GENERAL CONDITIONS FOR NATIONWIDE PERMITS.

The following general conditions apply to Nationwide Permits 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, and 40.

Steps shall be taken, upon completion of the projects, to ensure bank stability. This may include, but is not limited to, the placement of riprap or bank seeding.

Any damages to the immediate environment of the project by equipment needed for construction or hauling will be repaired immediately.

Care must be employed throughout the course of this project to avoid the creation of unneccessary turbidity which may degrade water quality or adversely affect aquatic life outside the project areas.

For Nationwide Permits 14, 21, (1-3 acres), 29, 33, 37, and 38, that require Agency coordination, in accordance with the Nationwide Permit General Condition entitled "Notification", Number 13(e)(i) , the Corps shall submit a pre-construction notification to Ohio EPA for review and comment.

E. OHIO STREAM SEGMENTS DESIGNATED AS COLDWATER AND EXCEPTIONAL WARMWATER HABITATS.

Nationwide Permits 23, 26, 29, and 32 shall not authorized impacts to streams referenced on the following list.

Ohio Stream Segments Designated Coldwater Habit

Pittsburgh District

Ohio River Basin

SEGMENT	CWH	TRIBUTARY TO
Longs Run	*	McIntyre Creek-Cross Creek-Ohio River
Polecat Hollow	*	McIntyre Creek-Cross Creek-Ohio River
Slabcamp Creek	*	McIntyre Creek-Cross Creek-Ohio River
Slab Run	*	McIntyre Creek-Cross Creek-Ohio River
Little McIntyre Creek	*	McIntyre Creek-Cross Creek-Ohio River
Cedar Lick Run	*	Cross Creek-Ohio River

Clay Lick Creek	*	Cross Creek-Ohio River

Ohio Stream Segments Designated Coldwater Habit

Pittsburgh District

Ohio River Basin

SEGMENT	CWH	TRIBUTARY TO
Grassy Run	*	Salem Creek-Cross Creek-Ohio River
Lea Branch	*	Salem Creek-Cross Creek-Ohio River
Permars Run	+	Wells Run-Ohio River
North Fork	+	Wills Creek-Ohio River
Island Creek	+	Ohio River
Jeddo Run	+	Ohio River
Goose Run	+	Ohio River
Nancy Run	+	North Fork-Yellow Creek-Ohio River
Center Fork	+	Elkhorn Creek-Upper North Fork-Yellow Creek-Ohio R.
Trail Run	+	Center Fork-Elkhorn Cr.-Upper North Fork-Yellow Cr.-Ohio R.

Mahoning River Basin

Silver Creek	+	West Branch Mahoning River

Ohio Stream Segments Designated Exceptional Warmwater Habit

SEGMENT	CWH	TRIBUTARY TO
Sunfish Creek - Paine Run to Nigger Run	+	Ohio River
Standingstone Run- RM 0.5 to the mouth	+	Sunfish Creek-Ohio R.
Captina Creek - confluence with North and South Forks to St. Rte. 7 (RM 0.8)	+	Ohio River
Bend Fork - Joy Fork (RM 4.0) to the mouth	+	Captina Creek-Ohio R.
North Fork - Long Run (RM 4.0) to the mouth	+	Captina Creek-Ohio R.
Elkhorn Creek	+	Yellow Creek-Ohio R.
Strawcamp Run	+	Elkhorn Creek-Yellow Creek-Ohio River
Frog Run	*	Center Fork-Elkhorn Creek-Yellow Creek-Ohio R.
Little Beaver Creek	+	Ohio River
Middle Fork- spillway at Lisbon (RM 12.5) to confluence with West Fork	+	Little Beaver Creek-Ohio R.
WestFork - confluence with Brush Creek to mouth	+	Little Beaver Creek-Ohio R.

***Designated use based on the 1978 water quality standards;**

+Designated use based on the results of a biological field assessment performed by the Ohio Environmental Protection Agency.

Donald M. Brafford
Jack A. Hamilton & Associates, Inc.
Box 471
342 High Street
Flushing, OH 43977

Melanie Homan
American Energy Corporation
43521 Mayhugh Hill Road
Beallsville, OH 43716